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Peter W. Austin

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INTELLECTUAL PROPERTY ADMINISTRATION
LEGAL DEPARTMENT, M/S 35
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EXAMINER

CHANG, YEAN HSI

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,555

Applicant(s)

AUSTIN ET AL.

Examiner

Yean-Hsi Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “a hard drive securing mechanism” in claim 1, and “a securing lever mechanism” in claim 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: "a hard drive securing mechanism" claimed in claim 1 and "a securing lever mechanism" are not discussed in the specification; the reference character "60" has been used to designate both "lever" and "carrier".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooke et al. (US 5,112,119).

Cooke teaches a computer system (fig. 1A) comprising: a chassis (20, fig. 2), a processor (inherent element of a computer system), a hard drive securing mechanism (fig. 6), the hard drive securing mechanism being operable to secure a plurality of hard drives to the chassis (fig. 6) with a rotatable lever (420, fig. 23), and at least one hard drive secured by the hard drive securing mechanism (fig. 9) (claim 1); wherein each

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hard drive includes a plurality of protruding members (190, fig. 7), further wherein the hard drive securing mechanism is operable to secure the plurality of hard drives by restricting the movement of the plurality of protruding members (see col. 11, lines 14-16) (claim 2); the hard drive securing mechanism further comprising: a plurality of guides (90, fig. 9) secured to the chassis restrict the movement of a plurality of protruding members (fig. 9), and a hard drive carrier (200, fig. 8), wherein the rotatable lever includes a plurality tapered guides (540's, fig. 19B), each tapered guide being configured to receive and secure a protruding member (190A, fig. 15) (claim 3); wherein a first hard drive (215) is securable between the lever and a first set of guides (90, fig. 9) (claim 4); wherein each tapered guide is configured to receive the protruding member when the rotatable lever is in a first position (fig. 23), further wherein, each tapered guide is configured to prevent movement of the protruding member when the lever is in a second position (fig. 25) (claim 5); wherein the rotatable lever includes a protrusion (535, fig. 19B) biased by a flexible member (450, fig. 16), further wherein the protrusion is captured when the securing lever is disposed in the second position (fig. 16) (claim 6); wherein a second hard drive (195, fig. 20) securable between the hard drive carrier and a second set of guides (90, fig. 8) (claim 7); wherein rotatable lever is operable to drive the carrier towards the second set of guides (90, fig. 8) (claim 8); wherein the rotatable lever comprises a cam (535, fig. 20) configured for sliding engagement with the carrier (portion 205 of carrier 200, fig. 20) (claim 9); wherein the rotatable lever comprises a tab (portion 685, fig. 25) for operating the rotatable lever (claim 11); and wherein the rotatable lever comprises a stop (leading edge of 535, fig. 20) that engages

a surface (320A, lower surface of 205, figs. 11 and 20) on the carrier to prevent rotation of the rotatable lever past the first position as the rotatable lever is rotated in a second direction (635, fig. 23); a moveable obstruction (580, fig. 25) disposable over the rotatable lever, wherein when the moveable obstruction is disposed over the rotatable lever, the moveable obstruction prevents the rotatable lever from rotating from the second position to the first position (see fig. 25A), and further wherein, when the rotatable lever is disposed in the first position (fig. 24), the rotatable lever prevents the moveable obstruction from being disposed over the rotatable lever.

5. Claims 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooke et al.

Cooke teaches a hard drive securing system (fig. 6) comprising: a plurality of guides (100, fig. 9) secured to a chassis (20, fig. 2), a hard drive carrier (200, fig. 8) held by a first plurality of guides (90, fig. 8) and configured to support a plurality of hard drives (195, fig. 8), and a securing lever mechanism (420+90, fig. 6) operable to secure the plurality of hard drives to the hard drive carrier (see fig. 8 and col. 11, lines 14-16) (claim 14); wherein the securing lever mechanism has a guide portion (90, fig. 9) configured to receive a portion of a hard drive (220 of 215, fig. 9) when the securing lever mechanism is in a first position (open position, fig. 23) (claim 15); wherein a first hard drive is secured when the securing lever mechanism is rotated to a second position (fig. 25) (claim 16); wherein the securing lever mechanism is operable to rotate from the first position to the second position (shown in figs. 23 and 25) (claim 17);

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wherein the securing lever mechanism comprises a latch (610, fig. 25A) to secure the securing lever mechanism (420, fig. 23) when the securing lever mechanism is in the second position (claim 18); and wherein the securing lever mechanism is configured with a cam (535, fig. 20) to drive the hard drive carrier as the securing lever mechanism is rotated from the first position to the second position (claim 19).

6. Claims 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooke et al.

Cooke teaches a method of securing a plurality of hard drives to a computer chassis, comprising: disposing a first hard drive (215, fig. 9) between a first restraint (C1, fig. 9) and a securing lever (420, fig. 6), deploying a second hard drive (195, fig. 8) between a second restraint (C2, fig. 8) and a carrier (200, fig. 8) configured to direct the movement of the second hard drive, and rotating the securing lever to simultaneously secure the first hard drive by the first restraint and the lever, and the second hard drive by the carrier and the second restraint (see fig. 25) (claim 22); providing each hard drive with a plurality of protruding members (220 for 215, fig. 9; and 210 for 195, fig. 8) (claim 23); configuring the securing lever with a tapered guide (540, fig. 19B) to receive a first plurality of protruding members (220) in a first position of the securing lever and to restrict movement of the first plurality of protruding members in a second position of the securing lever (see fig. 25 and col. 11, lines 14-16) (claim 24); and configuring the securing lever with a cam surface (end surface of 535, fig. 20) to drive the carrier in a

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first direction (upward in fig. 20) as the securing lever is rotated from a first position to a second position (claim 25).

7. Claims 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooke et al.

Cooke teaches a rotatable lever (420, fig. 19B) for securing a hard drive to a chassis, comprising: a plurality of guides (535 and 540, fig. 19B), each guide being configured to receive a protruding member when the securing lever is in a first position (fig. 23) and to restrict the protruding member when the securing lever is in a second position (fig. 25) (claim 28); a first portion (lower portion in fig. 19B) including at least one of the plurality of guides, a second portion (upper portion in fig. 19B) including at least a second of the plurality of guides and an operator (at 685, fig. 19B), and a connector (515, fig. 19B), connecting the first and second portions (claim 29); wherein the first portion and the second portion include a cam surface (end surface of 535 and 540, fig. 19B) (claim 30); and wherein each guide is tapered (better shown in fig. 23) (claim 31).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10, 12-13, 20-21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooke et al. in view of Kikinis (US 5,539,616).

Cooke discloses the claimed invention except a spring being compressed as the rotatable lever is rotated in a first direction, and biasing the carrier towards the rotatable lever when the rotatable lever is rotated in a second direction.

Kikinis teaches a spring mechanism (75, fig. 2) at the inner end of a module bay (19, fig. 2) being compressed when a module is pushed in the bay and biasing the module toward the outward direction.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hard drive bay with the spring mechanism taught by Kikinis such that the hard drive may be easily retracted.

Allowable Subject Matter

10. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record, Cooke et al. (US 5,112,119), and Kikinis (US 5,539,616), taken alone or in combination, fails to teach or fairly suggest: a method of securing a plurality of hard drives to a computer chassis, comprising disposing a first

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hard drive between a first restraint and a securing lever, deploying a second hard drive between a second restraint and a carrier configured to direct the movement of the second hard drive, and rotating the securing lever to simultaneously secure the first hard drive by the first restraint and the lever and the second hard drive by the carrier and the second restraint, and forming the restraints by cutting and bending a portion of the chassis to form a plurality of tabs, each tab configured to restrict the movement of a protruding member as set forth in claim 27.

Response to Arguments

12. Applicant's arguments filed Jan. 24, 2005 have been fully considered but they are not persuasive.

Regarding objections to the Drawings and Specifications, Applicants argue, ' "a hard driving securing mechanism" (e.g., 40) is clearly illustrated in many of the figures, including FIG. 2. See also, e.g., FIGS. 4-6 ', ' a "securing lever mechanism ..." (e.g., 60) is also clearly illustrated in several of the figures, including FIG. 2. See also, e.g., FIGS. 4-9 ', and ' a "hard drive securing mechanism" as recited in claim 1 ... the specification describes an embodiment of such a mechanism (e.g., 40) throughout the specification. See, e.g., Application, page 11, lines 6-22; see also, e.g., id. at page 15, line 15 - page 18, line 15 '. The Applicants are respectfully suggested to check in the Drawings together with the Specification, and you probably will only see "hard drive latching

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system 40", "securing lever 60", and "lever 60" rather than "hard drive securing mechanism" and "securing lever mechanism".

Regarding claims 1, 14, 22 and 28, Applicants also argue, "the drive retainer 420 merely retains disk drives within the structure 20. It does not transmit any force to a second object", and "the Cooke et al. reference fails to teach or suggest a 'rotatable lever,' the cited reference necessarily fails to disclose 'a hard drive securing mechanism . . . operable to secure a plurality of hard drives to the chassis with a rotatable lever". Element 420 of Cooke is a mechanical object made of electrical conductive material, it transmits force to disk drives (as indicated in col. 11, lines 14-16, and col. 15, lines 21-25) upon rotation about a pivot 640 (see col. 12, lines 58-65, col. 14, lines 62-65, and col. 15, lines 21-25) and holding disk drives in place, therefore, it is reasonable to say retainer 420 is a lever acting as a hard drive securing mechanism.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Correspondence

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yean-Hsi Chang whose telephone number is (571) 272-2038. The examiner can normally be reached on 07:30 - 16:00.

If attempts to reach the examiner by telephone are unsuccessful, the Art Unit phone number is (571) 272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431 for regular communications and for After Final communications. There are RightFax numbers and provide the fax sender with an auto-reply fax verifying receipt by the USPTO: Before-Final (703-872-9318) and After-Final (703-872-9319).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8558.

Yean-Hsi Chang
Primary Examiner
Art Unit: 2835
March 4, 2005


YEAN-HSI CHANG
PRIMARY EXAMINER